

## INTERNATIONAL SEARCH REPORT

PCT/GB 03/03771

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 H04R9/04

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 H04R C21D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	PATENT ABSTRACTS OF JAPAN vol. 1998, no. 02, 30 January 1998 (1998-01-30) -& JP 09 275598 A (HITACHI LTD), 21 October 1997 (1997-10-21) abstract	1,2,5-7, 9,22-25, 30-32
A	---	3,4,8, 10-21, 26-29
X	GB 2 166 023 A (DELBUCK FASCAL) 23 April 1986 (1986-04-23) page 1, line 56-85 page 3, line 126 -page 4, line 43 figure 7 page 6, line 53 -page 7, line 18 ---	1,31,32
A	---	2-30
		-/-

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

## \* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the International search

5 March 2004

Date of mailing of the international search report

19/03/2004

Name and mailing address of the ISA  
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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 91 06191 A (LYTH CHARLES DAVID) 2 May 1991 (1991-05-02) page 1, line 1-4 page 5, line 15 -page 6, line 6 page 9, line 9 -page 11, line 24 -----	1-32

## INTERNATIONAL SEARCH REPORT

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Patent document cited in search report		Publication date		Patent family member(s)		Publication date
JP 09275598	A	21-10-1997	NONE			
GB 2166023	A	23-04-1986	US	4590332 A		20-05-1986
WO 9106191	A	02-05-1991	AT AU DE DE DK EP ES WO GR US	125999 T 6630390 A 69021390 D1 69021390 T2 496802 T3 0496802 A1 2077691 T3 9106191 A1 3017862 T3 5475765 A	15-08-1995 16-05-1991 07-09-1995 25-01-1996 18-09-1995 05-08-1992 01-12-1995 02-05-1991 31-01-1996 12-12-1995	



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CASE NO. 8739		
G.O. 157 JN		
07 FEB 2003		
A/C?	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N
CPA?	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N
COPIED		

Your Reference: JVN/8739 GB  
Application No: GB 0220575.5

4 February 2003

The Patent Office  
Patents Directorate

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South Wales NP10 8QQ

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Dear Sirs

**Patents Act 1977: Search Report under Section 17(5)**

I enclose two copies of my search report and two copies of the citations.

**Publication**

I estimate that, provided you have met all formal requirements, preparations for publication of your application will be completed soon after 27 January 2004. You will then receive a letter informing you of completion and telling you the publication number and date of publication.

**Amendment/withdrawal**

If you wish to file amended claims for inclusion with the published application, or to withdraw the application to prevent publication, you must do so before the preparations for publication are completed. No reminder will be issued. If you write to the Office less than 3 weeks before the above completion date, please mark your letter prominently:  
**"URGENT - PUBLICATION IMMINENT".**

Yours faithfully

Stephen Jennings  
Examiner

<sup>†</sup>Use of E-mail: Please note that e-mail should be used for correspondence only.



Application No: GB 0220575.5  
Claims searched: 1-32

Examiner: Stephen Jennings  
Date of search: 4 February 2003

## Patents Act 1977 : Search Report under Section 17

### Documents considered to be relevant:

Category	Relevant to claims	Identity of document and passage or figure of particular relevance	
X	1,3-5,22,31-32	US 4353432	(Hasegawa) See figures 4,5
X	1,5,22,31-32	JP 550003232 A	(Sansui Electric Co) see figures 3 and 4
X	1,5,22-23,30-32	EP 1241917 A2	(Pioneer) See figure 4
A		GB 0694058	(Milnes) See figure 10, page 4 lines 34-46

### Categories:

X Document indicating lack of novelty or inventive step	A Document indicating technological background and/or state of the art.
Y Document indicating lack of inventive step if combined with one or more other documents of same category.	P Document published on or after the declared priority date but before the filing date of this invention.
& Member of the same patent family	E Patent document published on or after, but with priority date earlier than, the filing date of this application.

### Field of Search:

Search of GB, EP, WO & US patent documents classified in the following areas of the UKC<sup>v</sup>:

H4J

Worldwide search of patent documents classified in the following areas of the IPC<sup>7</sup>:

H04R

The following online and other databases have been used in the preparation of this search report:

WPI, EPODOC, JAPIO